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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,053	08/06/2001	Daniel A. Crawford	DP-304678 (DEP-0216)	9864

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EXAMINER	
HARTMAN JR, RONALD D	
ART UNIT	**PAPER NUMBER**
2121	3

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/923,053	CRAWFORD ET AL.	
	Examiner	Art Unit	
	Ronald D Hartman Jr.	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 August 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11,13-17 and 19* is/are rejected.

7)☒ Claim(s) *10,12,18,20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-20 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 9 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Jankins et al., U.S. Patent No. 6,272,400; having an effective filing date of 7/13/1998.

As per claim 1, Jankins teaches an actuator controller (networked vacuum controller) comprising:

- a processor for controlling an actuator associated with the actuator controller (e.g. Figure 4 element 74; C 6 L28-38; "A processor drives the operations ... and communication capabilities";
- a communication device in communication with said processor, said device receiving control commands from a master controller, said device capable of communicating in multiple languages (e.g. Figure 4 elements 61 or 68/70; C7 L7-8, "The host interface provides communication ... the

host controller"; C7 L45-52, "A standard BitBus interface communicates ... the same interface hardware.";

- a memory accessible by said processor (e.g. Figure 4 elements 75 and 76; C6 L29-34, "Flash storage provides ... memory capabilities.";
- wherein the processor determines a language of the control commands and retrieves a control program from memory corresponding to the language (e.g. C8 L26-40, "When issuing instructions, the host controller ... to the vacuum network." And C8 L56-63, "Again, an appropriate software driver is selected ... into the protocol of the selected driver.".

4. As per claim 9, Jankins further teaches:

- the determination of the language of the control commands is determined repeatedly on a predetermined schedule (taught as the determination of the language for each individual components upon insertion into the system and its eventual calibration; C5 L33-36, "the vacuum network controller is programmed to survey the identity ... within the vacuum network.".

5. As per claim 11, Jankins teaches analog communication techniques (C7 L47-54, "Further, other component interface (e.g. ... analog) communicate with vacuum system components ...".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jankins, as applied to claim 1 above.

As per claim 13, the rejection of claim 1 is applied from above (102 rejections).

Furthermore, with regards to claims 8 and 13, Jankins teaches the use of communication characteristics (inherently taught as the different communication protocols that are used since each one inherently possesses different characteristics (e.g. such as bit positions and command bit position, command length, etc.).

Furthermore, as per claims 8 and 13, although Jankins does not specifically teach the determination of control languages based on actuator identifier in the event that that actuator is calibrated, and the determination of the control language based upon the communication characteristics when the actuator is not calibrated, they are features that would be obvious to one of ordinary skill in the art at the time the invention was made. That is, since Jankins teaches both the determination of control languages and the calibration of components in a network vacuum system, a feature whereby the control language is determined based on these features would be obvious since it would afford the system of Jankins a more reliable method for determining the control language in the event that the components are or are not configured. This obvious

variation of Jankins forms a more reliable method for determining the control language used for the components since it allows for the determination of the control language without the need for the configuration information pertaining to the components known in advance.

8. Claims 2-4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jankins, as applied to claims 1 and 13 above.

As per claims 2-4 and 14, although Jankins does not specifically teach an actuator part number stored in memory, or stored in memory upon calibration of the actuator; it is an obvious variation of Jankins disclosed system. That is, since Jankins teaches that components are calibrated upon insertion into the vacuum network, and that the identity of components is surveyed so as to automatically configure them (C5 L33-36; "the vacuum network controller ... to survey the identity of components ... within the vacuum network."), a feature whereby this information is stored in a memory would be an obvious variation of Jankins disclosed system and its ability to create routing tables so that the operations as well as the configurations of the components take place correctly. Keeping identity information, such as a part number of an actuator or other subsystem component (e.g. cryo-pump or compressor) in memory would form an obvious way of dealing with the multiple components by allowing for quick references to be made to newly installed components so that the host controller will be able to effectively communicate and control the devices. Therefore, for at least these reasons,

the incorporation of these features would have been obvious to one of ordinary skill in the art at the time the invention was made.

9. Claims 5-7 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jankins, as applied to claim 1 above.

As per claims 5-7 and 15-16, although Jankins does not specifically teach the determination of whether the actuator is calibrated, nor whether the communication device is actively receiving valid control commands, they are features that are believed to be obvious variations of Jankins disclosed system for at least the following reason(s). That is, since Jankins determines the control language for each respective device based upon the device identity, and since the system of Jankins possesses the ability to configure each device upon connection to the network, a feature whereby only the valid control commands issued by the host controller are used for control purposes would be obvious since it would not be prudent for Jankins system to implement invalid commands. That is, since commands are issued from the host controller to the individual devices for performing functions pertaining to the individual devices, a feature whereby invalid commands are accepted by the components would form a less effective network system since invalid commands serve no purpose since they are invalid. Therefore, since Jankins teaches a system whereby commands, albeit obviously valid ones, are issued to the components with the intent of performing functions to or on the devices, they are obviously valid commands by nature since they serve to perform functions on the components. Furthermore, since the system of Jankins possesses the

ability to configure the components, and since the components would obvious not be calibrated unless the calibration was needed, these features are believed to be obvious variations of Jankins disclosed system and this variations would be obvious to one of ordinary skill in the art at the time the invention was made for at least the above reason(s).

10. Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jankins, as applied to claim 13 above.

As per claim 17, the rejection of claim 9, from above (102 rejections), is applied.

As per claim 19, the rejection of claim 11, from above (102 rejections), is applied.

Allowable Subject Matter

11. Claims 10, 12, 18 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As per claims 10, 12, 18 and 20, the prior art of record fail to teach the use of default position commands for the actuator upon the non-determination of the control language, by the processor, in combination with th3e other claimed features and or limitations of the claimed invention.

Jankins invention is not concerned with the positioning of the components, nor with the use of defaults for the positioning of the components, nor with the use of default

positions for the components when the processor cannot determine the control language being used to command the components. Instead, Jankins teaches the use of determining control languages by periodically polling the network for determination of newly added components, and based upon the newly added components identity, proper control commands may be issued from the host controller using information derived using routing tables.

Therefore, since no particular reference or obvious combination of references teaches the claimed default position based on the non-determination of the control language by the processor, this feature is believed, when taken in combination with the other claimed features, to present features that are neither taught or rendered obvious by the prior art of record. Therefore for at least these reason, these features are believed to be allowable over the prior art of record.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No.5,796,607; issued to Le Van Suu on 8/18/1998.

U.S. Patent No.5,485,590; issued to Hyatt et al on 1/16/1996.

U.S. Patent No.5,307,346; issued to Fieldhouse on 4/26/1994.

U.S. Patent No.5,842,039; issued to Hanaway et al on 11/24/1998.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald D. Hartman Jr. whose telephone number is (703) 308-7001. The examiner can normally be reached Tuesday-Friday, 1pm – 10:30 pm EST and Saturdays 4pm-8pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anil Khatri, can be reached at (703) 305-0282. The fax number for this examiner is (703) 746-5408.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9618.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

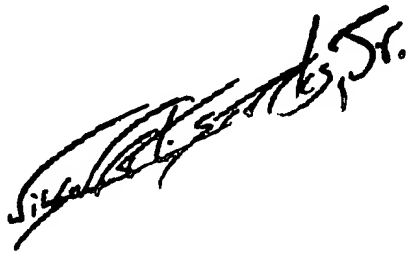
(703) 746-7239, (for formal communications intended for entry)

Or:

(703) 746-7240, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Ronald D. Hartman Jr.
Patent Examiner
Art Unit 2121
September 8, 2003



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